

CLAIMS

1. A method for attaching a refrigerator comprising the steps of:

inserting a heat conduction member between a cooling
5 stage of the refrigerator and a refrigerant container of a cooling system for containing a refrigerant gas condensed by the cooling stage, a heat pipe, or a heat shield plate; and
bringing the cooling stage into thermally contact with the refrigerant container, the heat pipe, or the heat shield
10 plate via a low melting point metal held in the heat conduction member.

2. The method for attaching a refrigerator according to claim 1, wherein the heat conduction member is a partition member for partitioning off the cooling stage from the
15 refrigerant container.

3. The method for attaching a refrigerator according to claim 1, wherein the heat conduction member is inserted between the cooling stage and the heat pipe.

4. The method for attaching a refrigerator according to
20 claim 1, wherein the heat conduction member is inserted between the cooling stage and the heat shield plate.

5. The method according to any one of claims 1 to 4, wherein a temperature of the low melting point metal is controlled to be constant at a melting temperature of the low
25 melting point metal, during the exchange of the refrigerator.

6. The method for attaching a refrigerator according to claim 1, wherein the low melting point metal is indium, low melting point solder, or wood metal.

7. The method for attaching a refrigerator according to claim 1, wherein the refrigerator is a GM refrigerator or a pulse tube refrigerator.

8. An attachment device of a refrigerator for detachably attaching a cooling stage of the refrigerator to a refrigerant container for containing a refrigerant gas condensed by the cooling stage, to a heat pipe, or to a heat shield plate, the attachment device comprising:

a heat conduction member inserted between the cooling stage and the refrigerant container, the heat pipe, or the heat shield plate; and

15 a low melting point metal held in the heat conduction member, the low melting point metal bringing the cooling stage into thermally contact with the refrigerant container.

9. The attachment device of a refrigerator according to claim 8, wherein a condensing fin is provided in the heat conduction member on a side of the refrigerant container or the heat shield plate.

10. The attachment device of a refrigerator according to claim 8 further comprising:

a pipe for connecting a refrigerator attachment sleeve containing the cooling stage, the low melting point metal, and

the heat conduction member to the refrigerant container or the heat shield plate, the pipe having a length enough to allow heat conducted by a pipe wall and a refrigerant gas.

11. The attachment device of a refrigerator according to
5 claim 8 further comprising:

a heater for heating the heat conduction member; and

a temperature sensor for measuring a temperature of the heat conduction member.

12. The attachment device of a refrigerator according to
10 claim 11, wherein the heater and the temperature sensor are detachable.

13. The attachment device of a refrigerator according to claim 8 further comprising:

temperature control means for keeping a temperature of
15 the low melting point metal constant at a melting temperature of the low melting point metal, during the exchange of the refrigerator.

14. Power equipment comprising:

a refrigerator attached by the attachment device
20 according to any one of claims 8 to 13.